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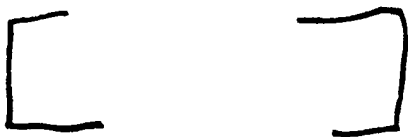
# NATIONAL INTELLIGENCE ESTIMATE

Soviet Forces for Intercontinental Conflict  
Through 1985

VOLUME I

KEY JUDGMENTS AND SUMMARY

GIA HISTORICAL REVIEW PROGRAM  
RELEASE AS SANITIZED



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NIE 11-3/8-74

~~TCS 000000 7411~~

14 November 1974

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THE DIRECTOR OF CENTRAL INTELLIGENCE

30 April 1975

Office of the Director

MEMORANDUM FOR: Holders of NIE 11-3/8-74

SUBJECT : Classification of Volumes I and II, SOVIET FORCES  
FOR INTERCONTINENTAL CONFLICT THROUGH 1985

1. The memorandum to holders of NIE 11-3/8-74 dated 15 April 1975 is rescinded.
2. The cover, title page, and table of contents of Volume I and Volume II of NIE 11-3/8-74 (TCS 889093-74) should be marked Restricted Data.
3. In addition, the following pages should be similarly marked:

Volume I

Page 7  
Page 9 (Figure 1)  
Page 13  
Page 25  
Page 26 (Figure 7)  
Page 29 (Figure 8)

Volume II

Page 3 (Figure 1)  
Page 18  
Page 77  
Page 78 (Figure 25)  
Page 80 (Figure 26)

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CIA HISTORICAL-REVIEW PROGRAM**

NIE 11-3/8-74

SOVIET FORCES  
FOR INTERCONTINENTAL  
CONFLICT THROUGH 1985  
Volume I  
Key Judgments and Summary

~~TCS 889093-7411~~

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THIS ESTIMATE IS ISSUED BY THE DIRECTOR OF CENTRAL INTELLIGENCE.

THE UNITED STATES INTELLIGENCE BOARD CONCURS, EXCEPT AS NOTED IN THE TEXT, AS FOLLOWS:

*The following intelligence organizations participated in the preparation of the estimate:*

The Central Intelligence Agency, the intelligence organizations of the Departments of State, Defense, the National Security Agency, and the Atomic Energy Commission.

*Concurring:*

The Deputy Director of Central Intelligence representing the Central Intelligence Agency

The Director of Intelligence and Research representing the Department of State

The Director, Defense Intelligence Agency

The Director, National Security Agency

The Assistant General Manager for National Security representing the Atomic Energy Commission

*Abstaining:*

The Special Assistant to the Secretary of the Treasury representing the Department of the Treasury

The Assistant Director, Federal Bureau of Investigation

*ALSO PARTICIPATING:*

The Assistant Chief of Staff for Intelligence, Department of the Army

The Director of Naval Intelligence, Department of the Navy

The Assistant Chief of Staff, Intelligence, Department of the Air Force

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## SOVIET FORCES FOR INTERCONTINENTAL CONFLICT THROUGH 1985

### NOTE

This Estimate is concerned with the major elements of the USSR's intercontinental attack forces (ICBMs, SLBMs, and bombers) and strategic defense forces (interceptors, SAMs, ABMs, and antisatellite and ASW forces). Other forces with some strategic and tactical intercontinental capabilities are discussed in Estimates in the NIE 11-13 and 11-14 series, in NIE 11-10-73, "Soviet Military Posture and Policies in the Third World," and in the forthcoming NIE 11-15, "Soviet Naval Policies and Programs."

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## KEY JUDGMENTS

The Soviets are pressing ahead with a broad range of programs for the near-term deployment of much improved offensive systems for intercontinental conflict, are gradually improving their deployed strategic defenses, and are vigorously pursuing the development of advanced technology applicable to strategic forces.

### In strategic offensive forces:

- Four new ICBMs are being tested. Three have MIRVs and a mobile version of the other is probably being developed.
- New silos which were started prior to the Interim Agreement are being completed and a program is under way to convert a major portion of the existing Soviet silos for the new missiles.
- More ballistic missile submarines with long-range missiles are being constructed.
- A new multipurpose bomber is being introduced into operational service.
- Additional new ICBMs and SLBMs are in the preflight stages of research and development.

Through these programs the Soviets will increase the number of their ICBM and SLBM warheads and improve the accuracy, survivability, and flexibility of their strategic offensive forces. The programs will add to Soviet capabilities for deterrence and for engaging in nuclear war.

### In strategic defensive forces:

- The Soviets are gradually improving the capabilities of forces currently deployed.
- They are developing a new antiballistic missile system which can be deployed much more rapidly than the one currently operational, possibly as a hedge against abrogation of the ABM Treaty.



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- In antisubmarine warfare they are developing new sensors, weapons, and techniques, and are attempting to augment their skills in the use of aircraft, surface ships, and submarines in coordinated operations.
- They are investigating the application of lasers to air defense, ABM, and antisatellite uses.

We believe that the Soviet leaders are united on both the broad outlines of detente policy and the high value of strategic programs, although it is reasonable to assume that they differ on priorities. As the need to make new strategic decisions arises, more clear-cut divergence within the leadership may become evident. For the short term, they appear to have forged a working consensus to move forward with major force improvements. The Soviet leaders probably hope through the SALT process to constrain future US strategic programs, or at least reduce the chances of major new US arms initiatives. But they probably do not expect detente or SALT to face them with pressures sufficient to alter their near-term deployment plans in any major way. They evidently see no contradiction between their current strategic programs and their detente policies.

We doubt that the Soviets have firmly settled on acceptance of strategic parity or have decided to seek *clear-cut* strategic superiority.<sup>1</sup> The concept of superiority in Soviet military doctrine is ill defined and is probably contested. In making the practical choices they confront, however, we believe that the Soviet leadership is pursuing a strategic policy which is both prudent and opportunistic—a policy aimed at assuring no less than comprehensive equality with the US and at the same time seeking to attain a margin of strategic advantage if US behavior permits.

Considering the history of Soviet strategic policy and force improvements, we believe that the motives underlying present Soviet strategic programs are to provide the USSR with:

- A counterbalance to the strategic strength of the US, plus its allies, and China;

<sup>1</sup> The Assistant Chief of Staff for Intelligence, Department of the Army, the Director of Naval Intelligence, Department of the Navy, and the Assistant Chief of Staff, Intelligence, Department of the Air Force, believe that the USSR is fully committed to a policy of achieving strategic superiority over the United States and its allies in the years ahead.

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- A narrowing of the gap with the US in important strategic weapon technologies;
- Hedges against future US force improvements and possible deterioration of US-Soviet relations;
- Opportunities to gain strategic advantages should US behavior permit.

Inherent in present Soviet force improvement programs is an increasing capability to conduct selective or limited nuclear operations. In view of Soviet doctrinal aversion to limited nuclear warfare, however, it is unlikely that the USSR will adopt limited-use concepts at the intercontinental level during the 1970s.

Our best estimate of Soviet strategic force improvements over the next ten years—assuming that present SALT limitations continue and that US strategic programs develop as currently programed—would provide to the USSR:

- By about 1980, with the present new systems, a lead over the US in most quantitative measures of offensive forces;
- In the 1980s, with improved or follow-on systems, a potential capability to destroy a large percentage of US Minuteman silos;
- An appearance of overcoming the US lead in such qualitative aspects of strategic forces as MIRV technology.

Despite expected improvements in Soviet forces, it is extremely unlikely that during the next ten years the Soviets will conclude that they could launch an attack which would prevent devastating US retaliation.

- The Soviets will be uncertain about the outcome of an attack on US Minuteman silos and would probably expect a considerable number to survive.
- Their ASW forces will be unable to locate and destroy the US ballistic missile submarine force at sea.
- There will continue to be weaknesses in Soviet defenses against low-altitude bomber attack.
- ABM defenses will be limited by treaty to insignificant levels.
- Soviet civil defense will be unable to prevent massive casualties and breakdown of the economy.

We do not foresee technological advances which would sharply alter the strategic balance in the USSR's favor during the next ten years. Nevertheless, the scope and vigor of Soviet research and development, particularly in strategic defensive systems, bear especially close watching in the years ahead.

Although deterrence will be maintained and no overall strategic advantage obtained, the political impact of future Soviet forces will depend to a great extent on how they are perceived by the Soviets, the US, and other nations. The question of whether the Soviets could obtain a psychological edge in a time of crisis, for example, will depend heavily on the degree to which those involved focus on the basic strategic relationship or on appearances, and on how perceptions of strategic forces affect views about the total capabilities and resolve of both sides.

As Soviet forces for intercontinental conflict improve, acute problems of perceived strategic imbalances, threats to security, and distrust of motives are likely to arise.

- Ideology and strategic doctrine make it difficult for the Soviets to embrace concepts of long-term strategic stability that take into account US security interests as well as their own.
- Soviet strategic doctrine puts a high premium on war-fighting capabilities as the best deterrent and on counterforce operations as the best way to employ Soviet forces should deterrence fail.
- The Soviets do not readily recognize that programs they deem important to their security can easily be read by the US as threatening its strategic position.
- The Soviets are likely to perceive countervailing US responses, as well as some features of present US programs, as deliberately threatening to them.

In the coming years, uncertainties faced by each side in assessing the capabilities of the other's future forces, particularly their qualitative characteristics, will tend to magnify more fundamental uncertainties and fears about the other side's strategic objectives. Unless such a strategic environment is significantly changed by arms limitation agreements, it is likely that the Soviet leaders will continue to believe that the acquisition of more and better strategic armaments is their best course.

## SUMMARY

### THE USSR'S CURRENT STRATEGIC SITUATION

1. The Soviets are pressing ahead with a broad range of programs for the near-term deployment of much improved offensive systems for intercontinental conflict. In addition they are gradually improving their deployed strategic defenses, and are vigorously pursuing the development of advanced technology applicable to strategic forces.

— *In offensive forces*, they are focusing on improving the accuracy, flexibility, and survivability of their ICBMs and SLBMs and on MIRVing their ICBMs. Four new ICBMs, three with MIRV payloads, are being flight tested. A mobile version of one of the missiles probably is being developed. Hardened launch control centers are being constructed at missile complexes, and a standby airborne command post for the Strategic Rocket Forces probably now is operational. New classes of nuclear-powered ballistic missile submarines with long-range missile systems continue under construction, and a new multipurpose bomber is starting to be de-

ployed. Additional ICBMs and SLBMs are in the preflight stages of research and development.

— *In defensive forces*, the Soviets are improving the capability of forces already deployed and are developing new systems. Older fighter-interceptors and surface-to-air missile systems are being phased out gradually as improved equipment is introduced. Current research and development activity includes programs for antisubmarine warfare, an antiballistic missile system which can be deployed much more rapidly than the one now operational, an endoatmospheric ballistic missile interceptor, and the application of lasers to strategic defense.

2. These developments follow a series of large-scale deployment programs over the past ten years which have provided the Soviets with a reliable deterrent and have brought about world recognition of the USSR's status as a superpower roughly on a par with the US. Through these earlier programs, the USSR has largely eliminated previous US quantitative advantages in strategic offensive forces.

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In terms of commonly used static measures of strategic offensive forces, the USSR now leads the US in numbers of ICBM and SLBM launchers and has a large lead in missile throw weight. The US retains a large lead in total missile and bomber weapons, owing in part to the MIRVing of its ICBMs and SLBMs.

] In defensive forces, the USSR retains large numbers of SAM launchers and interceptor aircraft, whereas comparable US forces are small and declining. For a summary view of quantitative trends over the past ten years, see Figure 1.

3. We believe that the Soviets view their strategic forces in 1974 as a credible deterrent and a powerful buttress to their international position, with a considerable potential for improvement under the terms of the Interim Agreement. They see the present US-Soviet strategic situation as one of mutual deterrence, in which either side would retain a massive retaliatory capability even if the other struck first. They are aware, however, that the US has a large numerical advantage in deliverable warheads and bombs, a significant lead in many technologies applicable to strategic forces, and an impressive capability to improve its forces further in the future. They believe that the better Soviet forces are prepared to fight nuclear war successfully, the more effective their deterrent will be. Thus, while having ample reason for satisfaction with their progress to date, the Soviet leaders see a need for continued efforts to improve their strategic forces.

4. The Soviet leaders must be uncertain about future US strategic arms decisions. On the one hand, they perceive powerful economic and political forces acting to constrain the US. On the other, they observe significant US force improvements currently under way

and in prospect, and they display an abiding respect for the political and technological ability of the US to respond to strategic challenge. In the face of these uncertainties, the Soviets seem convinced for now that their current force improvement programs are important to their security and their political image, and that simultaneous pursuit of detente provides a way of enhancing the economic and technological strength of the USSR. They evidently see no contradiction between these elements of their policy.<sup>2</sup>

#### FACTORS INFLUENCING SOVIET STRATEGIC POLICY

5. Decisions already made, and programs already in progress, impart a strong underlying momentum to the present Soviet force modernization efforts. The Soviets, however, will need to make new decisions at various stages with respect to the future—including decisions about the pace and ultimate size of ongoing programs and about the deployment of systems which have not yet reached the late stages of research and development. These decisions will be affected by a variety of factors which shape Soviet strategic policy. Among these are detente and SALT, economic and bureaucratic influences, Soviet threat perceptions, Soviet military doctrine, and the influence of US strategic policies.

6. We believe the Soviet leaders are united in the conviction that powerful strategic forces are essential to deter nuclear war, to wage nuclear war effectively should deterrence fail, and to project an image of national power. Beyond that, they appear united in the belief that strategic power is at once the

<sup>2</sup> See paragraph 15 for the view of the Assistant Chief of Staff for Intelligence, Department of the Army, the Director of Naval Intelligence, Department of the Navy, and the Assistant Chief of Staff, Intelligence, Department of the Air Force.

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enabler and guarantor of detente. Detente itself is viewed as the optimum present atmosphere for maximizing the power, security, and economic strength of the USSR, and as a way of setting prudent limits on strategic rivalry while allowing for greater Soviet foreign policy maneuver. There is little evidence that the leadership finds the present burden of defense spending unacceptable, or that the USSR would forgo, for purely economic reasons, military programs the leaders consider important. Both detente and SALT have received general support from the Soviet military, probably in part because of strong personal ties between Brezhnev and Minister of Defense Grechko, and also because detente has thus far gone hand in hand with ambitious military programs.

7. At present, the Soviets probably do not expect detente or SALT to face them with pressures sufficient to alter their near-term deployment plans in any major way. They will continue to explore the extent to which SALT can be used to limit US programs while minimizing limitations on their own. It is not likely that they will agree to meaningful limits on their forces unless they are persuaded that these will be matched by reciprocal constraints on the US and that failure to reach agreement will lead to major new US arms initiatives. We do not know whether they would moderate their strategic arms programs if they came to the view that they cannot continue to have both substantially improving strategic capabilities and detente.

8. The Soviets must see the strategic threat to the USSR as dynamic and constantly improving. In forecasting its future, they probably make generous assumptions about US capabilities and determination. Moreover, expressed Soviet concerns about US forward-based systems, the forces of US allies, and the emerging strategic capabilities of China

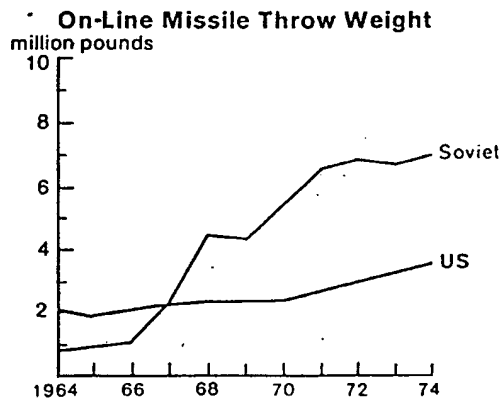
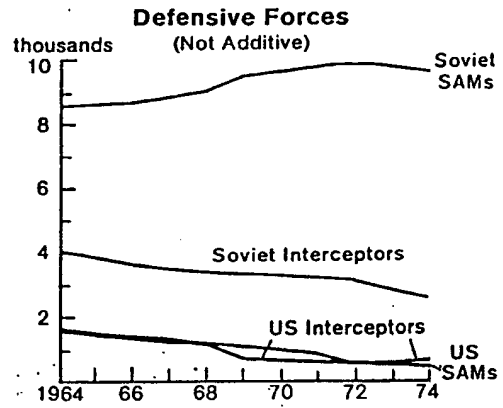
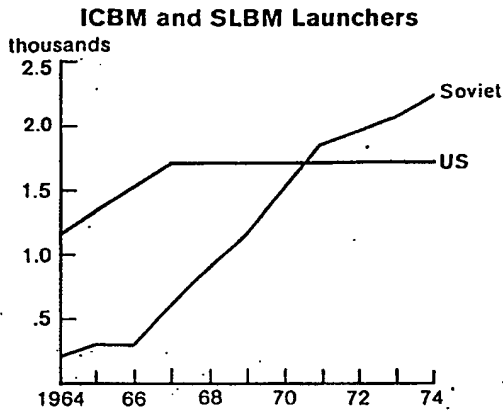
suggest that Soviet planners do not separate peripheral and intercontinental threats to the extent that US strategy does. They have both military and political concerns about US nuclear strike forces based on European and Asian territory and on carriers, about French and British SLBMs and other strategic nuclear delivery forces, and about the likelihood that China's present limited nuclear deterrent will be expanded to include potential threats to Moscow and other cities west of the Urals. This general outlook tends to weigh Soviet strategic power—including both medium range and intercontinental systems—against the combined power of all potential enemies. It tends to drive Soviet interests toward large and flexible forces, not governed solely by the US-Soviet balance.

9. Traditional Soviet military doctrine calls for superior military forces capable of waging and winning a nuclear war should deterrence fail. The relevance and nature of superiority and victory in a nuclear era, however, remain ill defined and probably contested. Elements of the doctrine which actively influence Soviet force posture decisions are probably those calling for forces to be employed in preemptive attack—if the Soviet leaders obtain convincing strategic warning—or in retaliatory attack after an enemy strike. Soviet doctrine makes it clear that, whether employed preemptively or in retaliation, a principal objective of Soviet strategic strikes would be to destroy the enemy's means of waging war. Thus, counterforce capabilities have high priority in Soviet military thinking.

10. US adoption earlier this year of a policy providing for a wide range of options for the use of nuclear forces—including selective, relatively small-scale employment options—will compel the Soviet leaders to consider the implications of limited intercontinental conflict. Thus far, the Soviets have generally re-

Figure 1

### Historical Trends in Selected Aspects of Strategic Forces



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jected the possibility that either the US or the USSR would be able to exercise restraint once nuclear weapons had been employed. They consider that theater nuclear war could quickly escalate to intercontinental conflict. Soviet statements and doctrine reflect the view that if nuclear weapons were employed against Soviet territory, the response would be unlimited retaliation. There is, however, circumstantial evidence of Soviet planning for limited use of nuclear weapons in a Central European war, and it is conceivable that such use might eventually be embraced in Soviet planning for intercontinental attack. Considering Soviet doctrinal aversion to limited nuclear conflict, however, we believe it unlikely that the Soviets will adopt limited-use concepts at the intercontinental level during the 1970s, although the capabilities of Soviet forces to adjust to such a possibility are likely to improve steadily.

#### THE QUESTION OF SOVIET STRATEGIC OBJECTIVES

11. During the long years when the USSR trailed far behind the US in strategic power, the Soviet leaders could readily agree that the country needed more and better strategic weapons. The present strategic situation, however, presents a mixed picture from the Soviet point of view. In these circumstances, while the Soviet leaders clearly agree on both the broad outlines of detente policy and the high value of strategic power, it is reasonable to suppose that they differ on priorities. They may differ as to whether restraint in future Soviet military programs is required in pursuit of detente goals, though there is little to suggest such differences today. As the need to make new strategic policy decisions arises, more clear-cut divergences among the Soviet leadership may become evident.

12. For the short term, we believe that the Soviet leadership has forged a working consensus which includes a commitment to move forward with major force improvement programs. The Soviets may well justify these programs as necessary to meet present and future deterrent and war-fighting requirements, to reduce or overcome the US lead in strategic weapon technology, and to hedge against uncertainties about US behavior and arms limitation prospects. But these programs also raise the question of whether the Soviet objective is some form of militarily or politically useful strategic superiority.

13. We doubt that Moscow has firmly settled on either acceptance of parity or a decision to seek *clear-cut* strategic superiority, in part because these concepts are difficult to relate to the practical choices of policy on weapons systems, budgets, and negotiating tactics. Rather, we believe Moscow is pursuing a strategic policy which is simultaneously prudent and opportunistic, aimed at assuring no less than the continued maintenance of comprehensive equality with the US, while at the same time seeking to attain some degree of strategic advantage if US behavior permits.

14. Unless the future sees dramatic changes in either Soviet or US strategic policy, it is likely that this pragmatic opportunism will continue to characterize Soviet strategic behavior. Underlying it, however, are attitudes of deep-seated fear as to the capabilities and intentions of the US and other nations, coupled with ambition and optimism that the process of history will allow the global balance of forces to swing in the Soviets' favor. Ideological attitudes, as well as an entrenched body of strategic doctrine, make it difficult for the Soviets to embrace concepts of long-term strategic stability that take into account US security interests as well as their own.



15. The Assistant Chief of Staff for Intelligence, Department of the Army, the Director of Naval Intelligence, Department of the Navy, and the Assistant Chief of Staff, Intelligence, Department of the Air Force, believe that the Soviet leaders foresee a decisive shift of the strategic balance in their favor, and view the superiority they hope to achieve as an umbrella under which to pursue their conflict goals throughout the world with a decreasing risk of interference ("counter-revolution") from the United States.

#### PRESENT FORCES FOR INTERCONTINENTAL ATTACK AND PROSPECTS FOR THEIR IMPROVEMENT

##### A. INTERCONTINENTAL BALLISTIC MISSILE FORCES

###### Status of Deployed Forces

16. As of 1 November 1974 the Soviets had a total of 1,607 ICBM launchers deployed. This number includes 1,399 operational launchers for five different systems and 174 launchers under construction, modernization, or conversion. It also includes 34 soft SS-7 launchers which are now considered nonoperational. Not included are 18 SS-9 launchers at Tyuratam that are probably part of the operational force.

###### The New Missiles

17. The Soviets are continuing to test four new missiles which incorporate major improvements over currently deployed systems:

— The SS-X-16 is a small, solid-propellant missile probably being developed both as a silo-based replacement for the SS-13 and as a mobile ICBM. It has about double the throw weight of the SS-13. The SS-X-16 is the only one of the new ICBMs which has not been tested with

MIRVs, but it appears capable of employing MIRVs in the future.

— The SS-X-17 is a medium-sized liquid-propellant missile with more than double the throw weight of the most capable SS-11 modification. It is being developed as a replacement for the SS-11. Although the SS-X-17 was tested initially with a single warhead, all recent tests have been with MIRVs.

— The SS-X-19 is another medium-sized liquid-propellant missile with even greater throw weight than the SS-X-17. The SS-X-19, called the "main missile" by Soviet leaders, is also being developed as a replacement for the SS-11. The SS-X-19 has been tested only with MIRVs.

— The SS-X-18 is a large, liquid-propellant ICBM with slightly greater throw weight than the SS-9, the missile it is being developed to replace. The SS-X-18 is being tested in both MIRV and single-warhead versions.

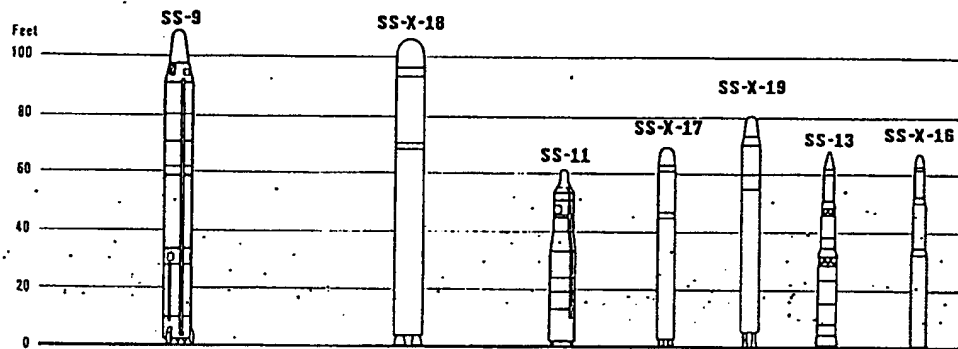
18. The continued testing of each of the four new Soviet ICBMs and the silo construction programs for them indicate that one or more versions of all of them will be deployed. Deployment of the MIRVed SS-X-19 and the single-RV version of the SS-X-18 could begin by the end of this year. Deployment of the SS-X-16 in silos, the MIRVed SS-X-17, and the MIRVed version of the SS-X-18 could begin in 1975. A mobile version of the SS-X-16 could be ready for deployment a year or two later. See Figure 2 for characteristics of these and other Soviet ICBMs.

19. Deployment of the new missiles will give the Soviets a large increase in the number of warheads available in their ICBM force. The combination of relatively high-yield war-

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Estimated Characteristics of Soviet ICBMs

Figure 2



SYSTEM	SS-9				SS-X-18		SS-11			SS-X-17	SS-X-19	SS-13	SS-X-16
	Mod 1	2	3	4	1	2	1	2	3				
Year Operational	1967	1966	1969	1971	Late 1974	1975	1966	•	1973	1975	Late 1974	1969	1975
Throw Weight (lbs)**	9,500	13,500	9,000	12,500	[REDACTED]						[REDACTED]		2,300
Number of RVs	1	1	1	3 MRVs	1	6 MIRVs (possibly 8)	1	1	3 MRVs	4 MIRVs	6 MIRVs	1	1
Warhead Yield (MT)	[REDACTED]												
Accuracy (CEP) (km)***	0.4-0.7	0.4-0.7	1-2 (DICBM) 1.5-3.0 (FOBS)	1.0	[REDACTED]						[REDACTED]		0.25-0.5

\* Testing has resumed on the SS-11 Mod 2, and it may be available for deployment now.

\*\*\* For details on uncertainties in estimating CEP for the new Soviet ICBMs, see Volume II and Annex A of Volume III.

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heads, improved accuracy, and greater targeting flexibility will improve the effectiveness of the force in a counterforce role. However, MIRVed Soviet ICBMs would require better accuracies than we estimate for the missiles now being tested to achieve a high probability of destroying a hardened missile silo with a single warhead.

20. Accuracy. Uncertainties [

]do not permit confident estimates of the precise accuracies of the new Soviet ICBMs. We believe that in their present configurations these systems have the potential to achieve CEPs of between 0.25 and 0.50 nautical mile (nm). [

]It could take another year or so of flight testing following initial deployment for the Soviets themselves to become confident of the operational accuracies of their new ICBMs. We do not believe that the Soviets are capable of attaining CEPs on the order of 0.15 nm with the new systems as presently configured. They probably will be able to achieve such accuracies in the 1980s with improved versions of the new systems or entirely new ICBMs.

21. Warhead Yield. Another parameter greatly affecting hard-target capability, warhead yield, is also highly uncertain for the new ICBMs. [

]In designing their MIRV payloads, it appears that the Soviets have struck a balance between hard-target capabilities and numbers of weapons, optimizing neither for the greatest yield per warhead nor for the maximum number of RVs.

22. Survivability. The new and converted ICBM silos are considerably harder and thus more survivable than any the Soviets have deployed in the past. In general, the new silos are better protected against high blast overpressures, electromagnetic effects, and possibly ground shock. Survivability of the ICBM force would be further enhanced should the SS-X-16 be deployed in a mobile configuration.

Present Deployment Plans

23. The Soviets evidently have programs under way to convert the bulk, but not all, of their existing ICBM launchers to the new systems. Judging by evidence [

]the present Soviet program calls for deployment of about 600 SS-X-17s and SS-X-19s. Most of these will be in converted SS-11 silos; about 10 percent will be in new silos started before the SALT agreements were signed. We believe that these new missiles will be MIRVed. Somewhat more than 400 SS-11 launchers, however, have recently been modified to accommodate a version of the SS-11 which carries MRVs rather than MIRVs. It is unlikely that further change is planned for these silos during the 1970s.

24. The picture with respect to heavy ICBMs is less clear. A few new silos for the SS-X-18 were started at five of the six SS-9 complexes before the SALT agreements, but conversion of existing SS-9 silos is under way at only three complexes having a total of about 170 launchers. The present Soviet plan for SS-X-18 deployment may thus involve a little more than half of the available heavy ICBM launchers. Barring further SALT limitations, however, it is likely that all 300 such launchers will be converted and that the bulk of the deployed SS-X-18s will be MIRVed.

25. On the basis of past Soviet deployment practices, the conversion of operational launchers to the new missiles in these numbers—a task which involves replacement of the entire missile system and major reconstruction of the silo—will take until the late 1970s. In the interim, about 15 percent of the operational ICBM force will be off line for conversion at any given time. During this same period, the Soviets may begin to deploy a mobile version of the SS-X-16. Presumably, they will also be dismantling some 200 older SS-7 and SS-8 launchers in exchange for newly constructed SLBM launchers under the terms of the Interim Agreement.

#### Prospects for Follow-on Systems

26. There are indications of a vigorous Soviet strategic missile R&D effort beyond that associated with the four new systems now being flight tested. The three major ICBM design bureaus have been expanded since flight testing of the four new ICBMs began, and we believe that all have new systems under way. This activity will probably result in the flight testing of several more new or improved systems by 1980. We know little about these systems. It is likely, however, that future Soviet ICBMs will have accuracies on the order of 0.15 nm CEP in the 1980s, advanced reentry vehicles, better warheads, and improved components leading to increased targeting flexibility and prolonged missile readiness.

#### B. SUBMARINE LAUNCHED BALLISTIC MISSILE FORCES

27. As of 1 November 1974, the Soviets had 642 SLBM launchers on 49 nuclear submarines which had reached operational status, plus at least another 304 launchers on units still under construction, fitting out, or on sea

trials. There are also 70 launchers on older diesel units.

28. During the past year the construction program for the 16-tube Y-class ended with the launch of the 34th unit. Construction of the 12-tube D-class continues—11 have been launched to date—and there is evidence that a lengthened version with perhaps 18 tubes will be launched soon. We believe the Soviets are planning to build a modern SSBN force close to the limits of 62 submarines and 950 SLBMs allowed under the Interim Agreement. Characteristics of the operational submarines and the missiles with which they are equipped are shown in Figure 3.

29. There is some evidence that the Soviets are planning to develop MIRVs for their SLBMs. [

] Although no flight testing has yet occurred, it is probable that the Soviets will be ready to start deploying MIRVs on their SLBMs by the late 1970s.

#### Patrol Patterns

30. The Soviets usually keep only a small portion of their SLBM force at sea—a policy in line with their view that hostilities would come only after a period of international tension. Normally, only about 15 percent of their Y- and D-class SSBNs are on patrol or in transit. Their patrol areas are shown in Figure 4. Four Y-class units are normally on station—two off each coast of the US. Thus far, most patrols by D-class units have been in the Barents Sea. [


] Because of the range of the SS-N-8, deployment in this area provides coverage of virtually all of the Northern Hemisphere, in-

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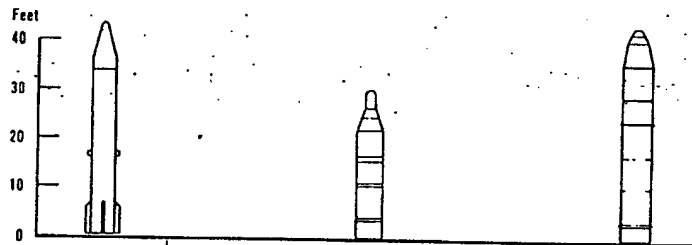
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**Operational Soviet Ballistic Missile Submarines**

Figure 3

		Year Operational:	Propulsion	Missile
<b>D class</b>	450 ft	1973	nuclear	12 SS-N-8 (4,200 nm)
<b>Y class</b>	425 ft	1968	nuclear	16 SS-N-6 (1,300-1,600 nm)
<b>H class</b>	380 ft	1960	nuclear	3 SS-N-5 (700 nm)
<b>G class</b>	320 ft	1960	diesel	3 SS-N-4 (300 nm) or 3 SS-N-5 (700 nm)

**Operational Soviet SLBM Systems**



**Estimated Characteristics and Performance\***

	SS-N-5	SS-N-6 Mod 1	SS-N-6 Mod 2	SS-N-6 Mod 3	SS-N-8
Year Operational	1963	1968	1974	1974	1973
Maximum Operational Range (MOR) (nm)	700	1,300	1,600	1,600	4,200
RV Weight (lbs)	2,800	[ ]			
Warhead Yield (MT)	[ ]	[ ]			
System CEP (nm)**	1-2	[ ]			

\* Excludes the SS-N-4, the Soviets' only surface-launched SLBM, which is gradually being phased out of the fleet.

\*\* For details on uncertainties in estimating CEP for Soviet SLBMs, see Volume II and Annex H of Volume III.

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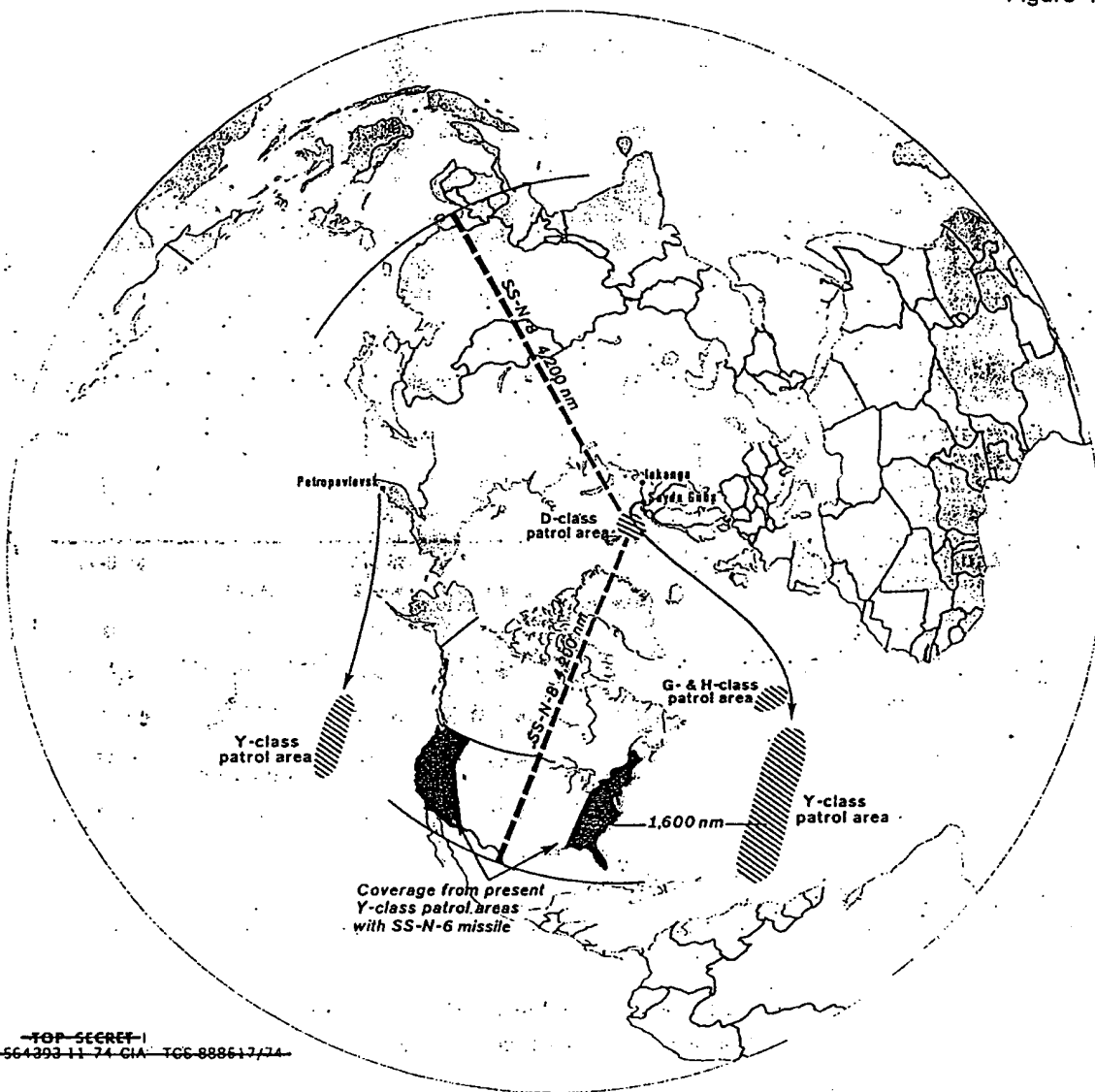
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### Present Soviet SSBN Patrol Areas

Figure 4



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cluding the US, Europe, and China. As more D-class units become operational, the Soviets will probably expand their areas of operation.

31. We believe that over the next ten years the Soviets will continue to deploy about the same proportion (15 to 20 percent) of their SSBN force as they have done in the past. Given the capability of the D-class to fire its long-range missiles from home port, however, the proportion of the SSBN force within firing range of the US will increase substantially as new D-class units become operational.

### C. FORCES FOR INTERCONTINENTAL AIR ATTACK

32. The Soviets evidently intend to retain an intercontinental bomber force to complement their formidable ICBM and SLBM forces. The Long Range Aviation (LRA) bomber and tanker component of the Soviet intercontinental attack forces consists of 110 Bears (70 of them equipped with the 350-nm AS-3 Kangaroo missile and five configured for reconnaissance) and 85 Bisons (about 50 fitted out as tankers). The force has remained at about the present size for the past decade.

33. The Backfire, a new twin engine, swing-wing aircraft, is a multipurpose bomber which has extensive capability for use in various types of peripheral missions in Eurasia and for naval missions over the open seas, and also has a capability for intercontinental attack. Its range and radius at subsonic speeds are comparable to those of the Bison. It could cover virtually all of the US on high-altitude, subsonic, two-way missions, if staged from Arctic bases and refueled in flight. On one-way missions Backfires could reach targets in the US from most of their home bases without refueling. If the Soviets intend to use sizable numbers of Backfires on intercontinental two-way missions, we believe they would require a new tanker force. There is some evidence

that the Soviets are developing a compatible tanker variant of one of their heavy transports.

34. We believe that the Backfire will be initially deployed in LRA for peripheral strike, closely followed by deployment in Soviet Naval Aviation in an antiship role, and that most Backfires will be assigned peripheral missions. The extent to which Backfires will be assigned missions against the continental United States remains an open question in terms of evidence currently available.<sup>3</sup> The capabilities of the aircraft make it a potential threat for attacks against the US, but we must await evidence from basing, operational and training patterns, and tanker development before we can confidently judge whether the Soviets intend the Backfire for intercontinental missions and, if so, to what extent.

35. We have no evidence of a program for a follow-on long-range bomber, but development of such a bomber is within Soviet capabilities. If the USSR decides to develop a new long-range bomber, we would expect to become aware of its existence four to five years before it reached operational status.

### SOVIET STRATEGIC DEFENSES AND PROSPECTS FOR THEIR IMPROVEMENT

#### A. DEFENSE AGAINST BALLISTIC MISSILES

##### The Moscow Antiballistic Missile System

36. The Moscow ABM system consists of the Dog House and Chekhov battle management radars, the Try Add engagement radars at each of the four complexes around Moscow, and the 64 Galosh missile launchers dis-

<sup>3</sup> The Assistant Chief of Staff, Intelligence, Department of the Air Force believes that subsequently some portion of the force will probably be assigned missions against the continental US.

tributed among these complexes. The system achieves maximum effectiveness only against missiles entering the battle management radar coverage. While it would provide little defense in the face of a large-scale missile attack, it could provide a credible defense against a small attack and protect against an accidental or unauthorized launch. For ballistic missile early warning, acquisition, and tracking coverage around Moscow, see Figure 5.

37. One of the primary limitations of the Moscow system is that the radars cannot distinguish reentry vehicles hidden in chaff clouds. The system is further limited by the mechanically directed Try Add target-tracking radars, which cannot simultaneously track widely spaced targets. Since there are only eight target-tracking Try Add radars at Moscow, the system could be saturated by a relatively light, coordinated attack.

#### Antiballistic Missile Research and Development

38. The Soviets are continuing their research and development efforts on ABM system components at the Sary Shagan test range. A goal of one program observed there appears to be the development of a new type of ABM system which can be deployed much more rapidly than the one at Moscow. In addition, a launch area for a new, conically shaped interceptor appears to have been completed. The conical missile is probably designed for endoatmospheric intercepts and presumably will be included in a system to take advantage of atmospheric filtering of chaff.

39. One ABM complex of the new type—consisting of a target-tracking radar, two interceptor-missile-tracking and command-guidance radars, six launchers, and support equipment—could be deployed in less than six months as compared with about five years for

one complex in the Moscow system. An extensive deployment program, however, would probably require several years to complete. The development of this ABM system now may be intended as a hedge against the abrogation of the ABM Treaty or for future deployment at Moscow.

40. The Soviets have also completed external construction of what is probably a laser system at Sary Shagan. This identification is based on observation of a large optical mount housed in a sliding shelter, a large associated building, [

]The activity at this complex may represent Soviet investigation of potential laser applications in both ABM and antisatellite programs.

#### B. AIR DEFENSE

41. Soviet strategic air defenses remain by far the largest in the world. As of 1 November 1974, they include some 4,500 early warning and ground-controlled intercept radars located at about 1,100 radar sites, some 2,600 fighter interceptors, and about 10,000 SAM launchers of all types. These numbers reflect a continuation of the gradual decline in deployment levels which has been under way for the last five years or so. However, because the reductions have lowered the proportion of older systems and because the Soviets have an active equipment modification program, the overall capabilities of the defense forces have improved. Despite these improvements the Soviets have major weaknesses in low-altitude defense against penetrating bombers and in defense against the US short-range attack missile (SRAM). Soviet surface-to-air missile coverage at various altitudes is shown on Figure 6.

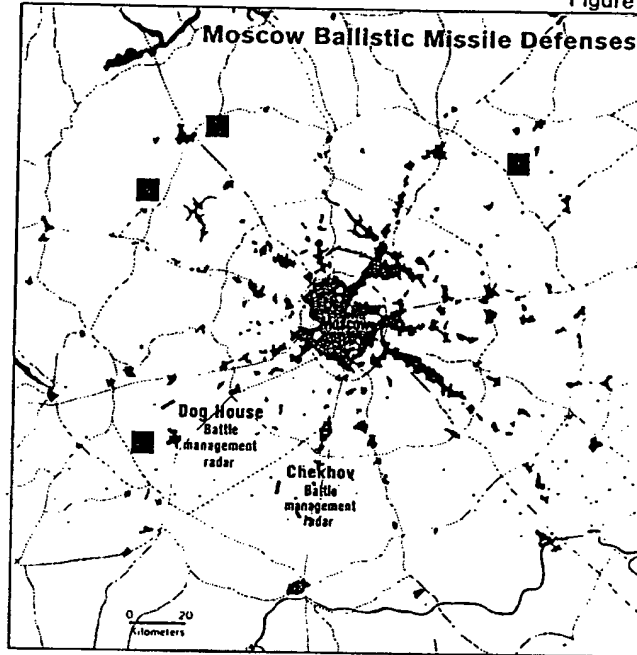
42. Current Soviet research and development on new systems include laser applica-



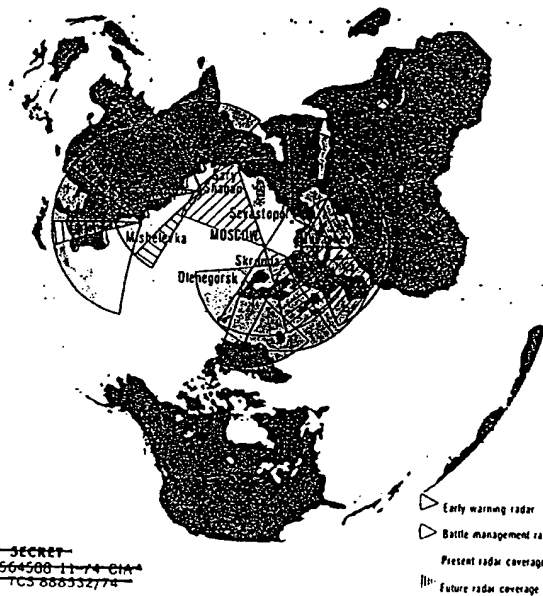
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Figure 5



**Ballistic Missile Early Warning  
and Acquisition Radar Coverage**



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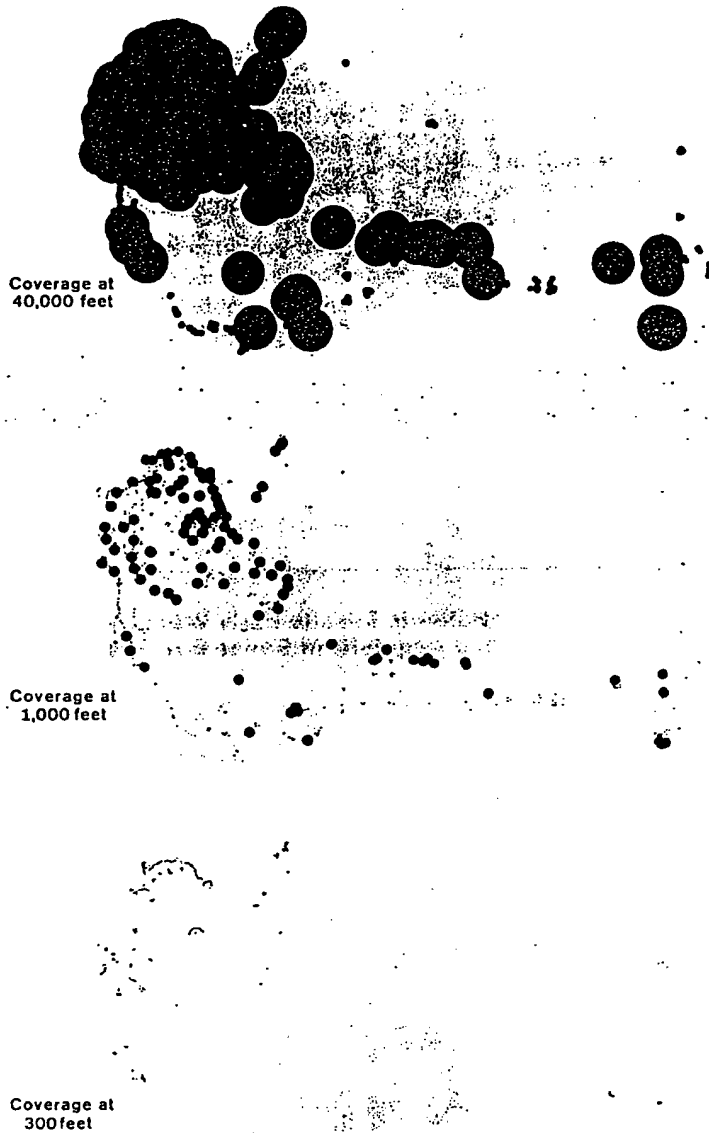
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### SAM Coverage of the USSR

Figure 6



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tions for air defense, new radars, components of a new low-altitude SAM, and a new system which may be a combination of a SAM and an antitactical ballistic missile system. During the next decade the Soviets are technically capable of developing airborne or ground-based laser weapons for use against aircraft. Such laser weapons, however, would be useful only in clear weather, would require precise target-tracking data, and would have to be deployed in large numbers for area defense. Deployment of large numbers of mobile SAMs such as the SA-6 might partially offset present weaknesses in the low-altitude SAM capabilities.

43. There is no evidence that the Soviets are developing an airborne warning and control system capable of detecting and tracking aircraft at low altitudes over land or an effective look-down/shoot-down system for their interceptors. If a development program were pursued with high priority, such systems could be initially deployed in the early 1980s. The Soviets may choose to retrofit a look-down/shoot-down system into existing fighters or to deploy it in a new interceptor, or both. If retrofitted into existing fighters, significant deployment could occur by 1985.

44. Considering the prospects for improvements in existing air defense systems and for deployment of new systems, we think it unlikely that the Soviets will be able to cope with sophisticated low-altitude attacks during the next ten years.

#### C. DEFENSE AGAINST BALLISTIC MISSILE SUBMARINES

45. The Soviets do not have an effective counter to the US SSBN force, but Soviet [

] reflect a determination to improve ASW capabilities. We expect the Soviets to

increase their ASW force, introduce improved sensors and weapons, and augment their skills in the use of air, surface, and submarine platforms in coordinated ASW operations.

46. The principal continuing weakness in Soviet ASW capabilities will be the lack of a system which can detect submarines at long ranges within the broad expanse of open oceans. We believe future Soviet systems for detecting submarines using fixed acoustic arrays would be effective only in small areas near the Soviet Union or in narrow straits. Geographic and technical considerations generally militate against the use of a long-range acoustic system similar to SOSUS.

47. There are indications the Soviets believe that nonacoustic techniques have potential for improving their capabilities in the open ocean. They have an extensive R&D program in nonacoustic detection, which primarily involves mobile sensors. We lack information on many aspects of this program. [

] Available information [ concerning nonacoustic detection methods indicates that none offers a capability for detecting submarines at ranges comparable to that of SOSUS, although some could improve the potential of mobile units.

48. Over the next ten years, we expect improvements in Soviet ASW capabilities which may permit detection of US ballistic missile submarines during limited area searches of the open ocean or in confined areas the SSBNs must transit. We do not believe that advances in either acoustic or nonacoustic techniques will give the Soviets more than a low probability of detecting US SSBNs on

patrol, although we do not rule out the possibility that they could detect a few and consequently could threaten some portion of the US SSBN force. Nevertheless, we estimate that Soviet capabilities will be insufficient to prevent most submarines on station from launching their missiles.

#### D. ANTISATELLITE DEFENSE

49. The Soviets now have a system which can conduct nonnuclear orbital intercepts of satellites by using ground radars and maneuverable interceptor spacecraft. It could be employed against satellites in low- and medium-altitude orbits. The Soviets have the technical capability to attack satellites in geostationary orbit by launching their orbital interceptor with a booster which has hitherto been employed for other purposes, but they have not tested such a combined system. The probable laser at Sary Shagan may have sufficient power to disable low- and medium-altitude satellites passing over the test center when atmospheric conditions are favorable. We believe, however, that short of preparation for war or retaliation for what they believed to be prior US action against their own satellites, it is unlikely that the Soviets would attack any US satellites.

#### E. CIVIL DEFENSE

50. The Soviet civil defense organization gained in importance in 1972 when a new deputy minister of defense was named its chief. Civil defense is now represented in high-level military decision-making councils and its new leadership has sought to reinvigorate the program. Civil defense planning emphasizes shelters, evacuation of urban populations, and dispersal of industry. Since 1971, the Soviets have built large bunkers at Moscow and ten other cities to protect a cadre of government

and reconstruction workers. This is in addition to bunkers built near Moscow, evidently to protect the national political and military command authorities. Shelter space is available in major urban centers to house up to one-third of the urban population, but we do not know the extent to which such shelters are stocked with supplies essential to survival. We believe the Soviets could evacuate up to 70 percent of the urban population within a week under ideal, but unlikely conditions.

51. Taking into account the reorganization of the civil defense program and the progress that has been made in the last three years, we believe that in the event of nuclear war the Soviets could expect that the program:

- would be able to protect top governmental authorities and a cadre of key officials;
- would save a considerable number of lives;
- but would not be able to prevent massive casualties and the breakdown of the economic structure.

#### FUTURE FORCES AND THEIR IMPLICATIONS

##### A. PROJECTIONS OF FUTURE FORCES

52. We can estimate the characteristics of Soviet forces and project deployment levels for the mid- to late-1970s with some confidence, assuming that the political climate of detente and the current SALT limits continue. During this period, unless restricted by further SALT agreements, we expect the Soviets to achieve:

- the deployment of MIRVs on most ICBMs and probably on some SLBMs;

- at least rough equality with the US in the number of missile reentry vehicles;
- a somewhat increased hard-target capability through improved missile accuracy;
- improved survivability and flexibility for their missile systems.

53. The period from 1980 to 1985 is far more difficult to predict. There is much less evidence on the types of weapon systems which the Soviets could deploy. Moreover, the strategic plans, policies, and objectives of both the USSR and the US in this period are far from clear. We believe the Soviets will put overall emphasis on qualitative improvements to add to the survivability and counterforce capabilities of their missile force and to upgrade their deterrent and war-fighting capabilities. In strategic offensive forces the Soviets will try at a minimum to maintain the image of parity with the US and to improve their capabilities against the US, its allies, and China. In strategic defensive forces, the Soviets will seek advanced systems in an effort to overcome the major weaknesses in their capabilities against low-altitude air attack and against SSBNs. Their specific force structures and improvements in this period will depend on their advances in research and development and on their perception of trends in the military and political situation.

54. We have constructed four projections to illustrate the variety of forces which the Soviets could have. Some key aspects of these projections are summarized in the accompanying table. All projections are consistent with currently observed activities and are within Soviet resource capabilities, but they are not considered equally likely developments:

- *Force 1* assumes that the ABM Treaty and the existing limits on Soviet ICBM and SLBM launchers remain in effect

through the mid-1980s. It represents a likely Soviet force under conditions in which the current political environment is maintained and strategic competition continues but is not accelerated. This Force is our best estimate of the technology the Soviets will achieve and the forces they would deploy within the present SALT constraints.

- *Force 2* represents the lowest level of effort which we believe the Soviets would consider. It also reflects our views of the lowest likely level of Soviet technical achievement.
- *Force 3* represents a high level of effort within the constraints of the Interim Agreement and ABM Treaty. It assumes that the Soviets successfully push the limits of their technological capabilities. Deployment of new systems is at sustained high rates.
- *Force 4* assumes that the Interim Agreement terminates in 1977 and that the Soviets begin now to prepare for that contingency. The ABM Treaty is assumed to remain in effect. The qualitative aspects and deployment rates in Force 4 are the same as in Force 3. The offensive forces grow more because the SALT constraints of the Interim Agreement lapse. This Force presumes an environment of increased hostility, in which the Soviets are either striving for a wide margin of strategic advantage or are seeking to offset an expected upswing in the US strategic effort.

55. We think it unlikely that the Soviets will achieve all of the technical successes and commit the resources implied by Forces 3 and 4.

SUMMARY COMPARISON OF FORCE PROJECTIONS\*

	Force 1	Force 2	Force 3	Force 4
<i>Missile IOC dates</i>				
New silo-based ICBMs.....	'75, '76	'75, '76, '77	'75, '76	'75, '76
Improved versions.....	'79, '80	'79, '82, '85	b	b
Mobile SS-X-16.....	1977	b	1976	1976
Follow-on ICBMs.....	1983	b	1980	1980
MIRVed SLBM.....	1978	1980	1977	1977
<i>Selected ICBM accuracies (CEP in nm)</i>				
New silo-based ICBMs.....				
Improved versions.....				
Follow-on ICBMs.....				
<i>ICBM deployment rates (annual average)</i>				
New silo-based ICBMs.....	190	135	290	290
Improved versions.....	240	150	b	b
Mobile SS-X-16.....	30	b	50	50
Follow-on ICBMs.....	190	b	260	300
<i>Air defense improvements (IOC dates)</i>				
Improved interceptor.....	1978	1980	1977	1977
Overland look-down/shoot-down system..	early- mid '80s	b	early '80s	early '80s
New low-altitude SAM.....	b	b	1978	1978
<i>Launchers in 1980 (on line)</i>				
ICBM silos.....	1,338	1,344	1,198	1,244
Mobile ICBMs.....	120	0	225	225
SLBMs.....	780	724	796	958
MIRVed ICBMs and SLBMs.....	1,114	826	1,901	2,067
SAM launchers.....	6,670	5,550	9,090	9,090
Interceptors.....	2,140	1,840	2,420	2,420
<i>Launchers in 1985 (on line)</i>				
ICBM silos.....	1,328	1,338	1,398	1,570
Mobile ICBMs.....	180	0	375	375
SLBMs.....	754	706	756	954
MIRVed ICBMs and SLBMs.....	1,814	1,498	2,523	2,893
SAM launchers.....	5,470	4,950	7,790	7,790
Interceptors.....	1,950	1,730	2,390	2,390

\* See Volumes II and III for further details on these projections and for the relationship of these forces to those projected in the *Defense Intelligence Projections for Planning*, designed specifically for planning in the Department of Defense.

b Not deployed in this Force.

## B. QUANTITATIVE MEASURES OF OFFENSIVE FORCES

56. The projected Soviet forces for intercontinental attack in 1975-1985 are compared with the currently programed US forces in terms of commonly used static measures in Figure 7. Options for the US to expand or improve its forces are not considered. The Soviets retain greater numbers of delivery vehicles in all projections. They exceed the US in equivalent megatons throughout the period in all but the lowest projection. In missile throw weight there is a large and growing asymmetry in the Soviet favor, whereas in missile throw weight and bomber loadings combined, only the high Soviet projections are above the US total in the 1980s. In warheads on operational missiles, the US

57. In SALT the Soviets have often stated that a comparison of only US and Soviet intercontinental forces does not adequately measure the strategic offensive balance. They insist that all forces capable of striking the Soviet Union, including NATO and Chinese systems, must be considered. Also, Soviet military literature and other evidence indicates that the Soviets include their own forces capable of attacking only peripheral targets, such as Europe, although they continue to resist the inclusion of these forces in the SALT negotiations. A possible Soviet view in this context is presented in Figure 8, using Force 1 projections. (We have deliberately grouped Chinese and Western forces in this presentation, although we do not know whether the Soviets would do so.) From this perspective opposing forces lead the Soviets in numbers of on-line weapons in both 1975 and 1980,

although the Soviets narrow the gap in the interim. The Soviets hold a slight advantage over the combined other forces in numbers of delivery vehicles, and a growing advantage in equivalent megatons. Other static measures, such as throw weight, which is not plotted on the figure, would also show a large Soviet lead.

58. We have not attempted in Figure 8 to forecast specific Soviet views about the quantitative relationships between Soviet and other strategic forces in 1985. If the Soviets anticipated a continuation of previous trends, they would probably expect the relationships to remain about the same as in 1980, with the levels increasing somewhat. However, they would be quite uncertain about specifics for a period so far in advance.

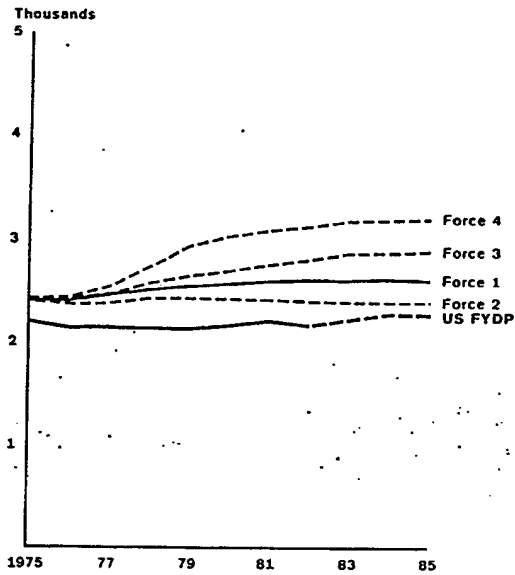
## C. ICBM SILO SURVIVABILITY

59. In the coming years—perhaps by the late 1970s and certainly in the 1980s—both the US and the USSR are likely to face large uncertainties about the ability of their silo-based missile forces to survive attack. The US has good estimates of its own silo hardness and its ICBM capabilities, but is relatively uncertain of Soviet ICBM capabilities against those silos and of Soviet silo hardness. The USSR has the same problem in reverse. At present, because of the better accuracies of US missiles and the relatively softer Soviet silos, the Soviets are probably aware that their force is the more vulnerable. As more accurate ICBMs are introduced into the Soviet force, and if US forces incorporate improved ICBMs, each side's concern about silo survivability will grow.

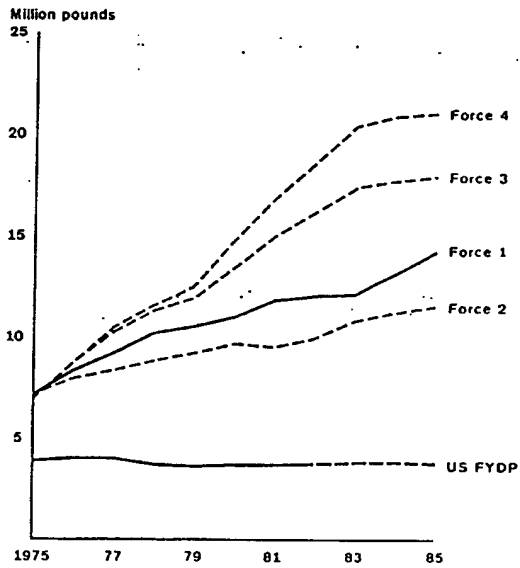
60. Estimates of silo kill probabilities are subject to wide variations caused by a number of factors. The most critical are the accuracies of the attacking missiles and the question of

### Quantitative Comparisons of Forces for Intercontinental Attack\*

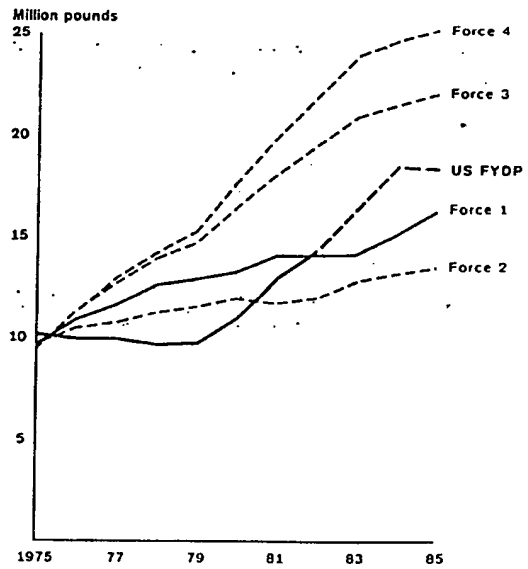
#### Total Delivery Vehicles



#### On-Line Missile Throw Weight



#### On-Line Missile Throw Weight and Bomber Loadings



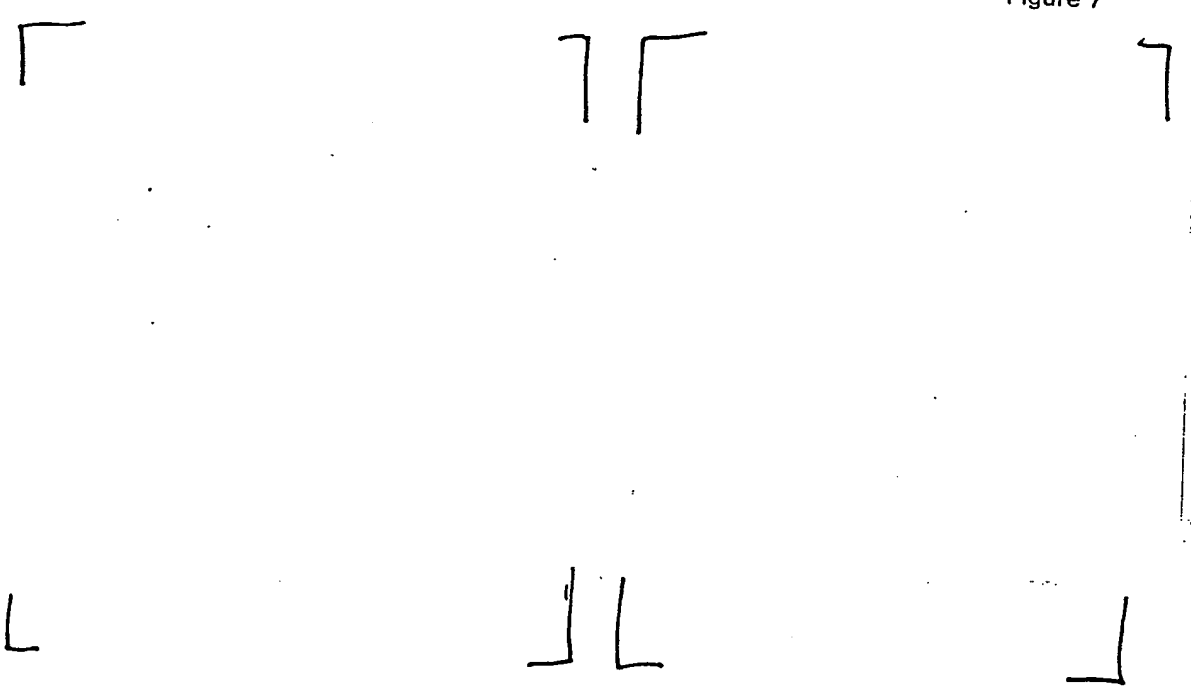
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Figure 7



\* Note: Backfire bombers (up to eight bombs or two ASMs) for intercontinental attack are not included in these figures. Their inclusion would somewhat increase the overall totals shown for the USSR.

Total delivery vehicles include ICBMs operational, in conversion, or under construction; SLBM launchers operational, under conversion, or in shipyard overhaul; and operational bombers. Excluded are SLBM launchers in SSBNs which have not yet begun initial sea trials and bombers configured for tanker or reconnaissance missions.

On-line static measures exclude ICBM silo launchers under construction or conversion and SLBM launchers on SSBNs undergoing sea trials, conversion, or shipyard overhaul.

Missile payloads composed of MRVs (which are not independently targetable) are counted as one RV.

The US programed force (FYDP) is derived and extrapolated from the force projections of the US Department of Defense Five-Year Defense Program as of January 1974.

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whether more than one nuclear weapon can be detonated successfully on a single target within a short period of time. Figure 9 illustrates the sensitivity of US calculations to variations in these and other factors.<sup>4</sup> Small variations in accuracy will have large effects when CEPs are improved, and uncertainty about whether systems and tactics can be designed to permit multiple targeting of silos will compound these effects. The entire range of uncertainty in the early 1980s could be so large as to leave each side with little confidence in the outcome of counterforce attacks against silos.

61. Assuming that the Soviets can successfully target two ICBM RVs against each Minuteman silo, and using the accuracies projected in all Forces but Force 2 in the 1980s, US silo survivability will decline sharply during this period. As illustrated in Figure 10, an attack by the Soviet forces projected in Force 1 could reduce US silo survivors to about 200 in 1985; the Force 3 and 4 forces could reduce survivors to very low levels. Soviet silo survivability will improve considerably if the US maintains its presently programmed force. However, Soviet planners would probably estimate that improvements in US Minuteman forces, now under discussion or in early stages of R&D, could reduce Soviet silo survivors to low levels in the 1980s. Thus, with US force options not firmly resolved, the Soviet planner today would probably conclude that the survivability of his silo-based missile force is not guaranteed by his present silo-hardening program.

<sup>4</sup>The analysis in paragraphs 60 through 62 and the accompanying graphics does not represent a full net assessment of the interaction between strategic forces on both sides, which would require consideration of many additional factors.

#### D. RESIDUAL MISSILE WARHEADS

62. The importance of silo survivability, and of uncertainties about it, is mitigated by the probability that both sides would retain large numbers of weapons even after surprise attacks on silos by either side. Figure 11 presents the residual missile RVs available for immediate targeting on both sides after a hypothetical surprise attack by either side against the other's silos. If Soviet forces develop as projected in Force 1, our best estimate, they could expect that even if they struck first, the US would retain several thousand missile RVs, largely the SLBMs at sea, for immediate targeting during most of the period. After such an attack, the Soviets too would retain ample weapons for other targeting requirements. The Soviets could expect their own surviving missile RVs to climb through the period even if the US struck first, so long as US forces develop as presently programmed. They would, however, be concerned that US deployment of improved ICBMs could considerably reduce the number of Soviet RVs expected to survive a US first strike. They could expect that in the 1980s their residual missile RVs available for immediate targeting would exceed those of the US if the USSR struck first. Although the Soviets might view such a trend as advantageous to them, they would also have to take into account the likelihood of many additional weapons in surviving US bombers. Thus, it appears that both sides could expect to retain substantial second strike capabilities throughout the period.

#### E. IMPLICATIONS FOR THE STRATEGIC ENVIRONMENT

63. One aspect of the strategic environment which we believe can be predicted with confidence is that the basis for mutual deterrence will continue to exist during the period

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Figure 8

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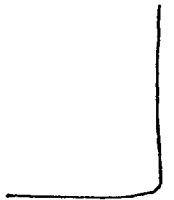
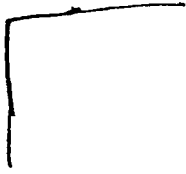
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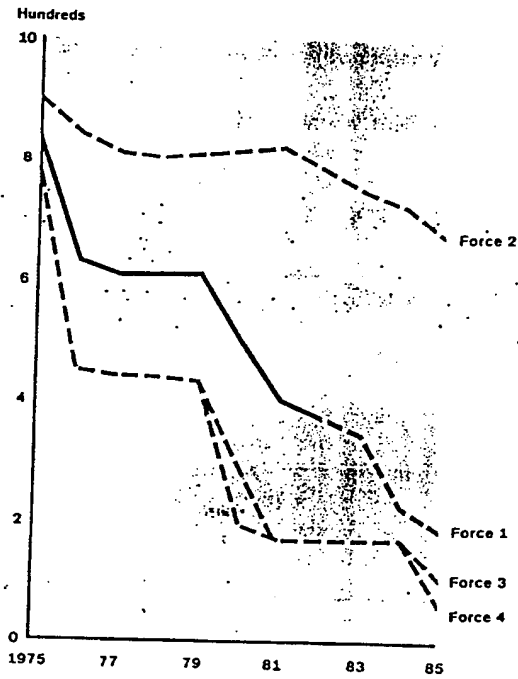
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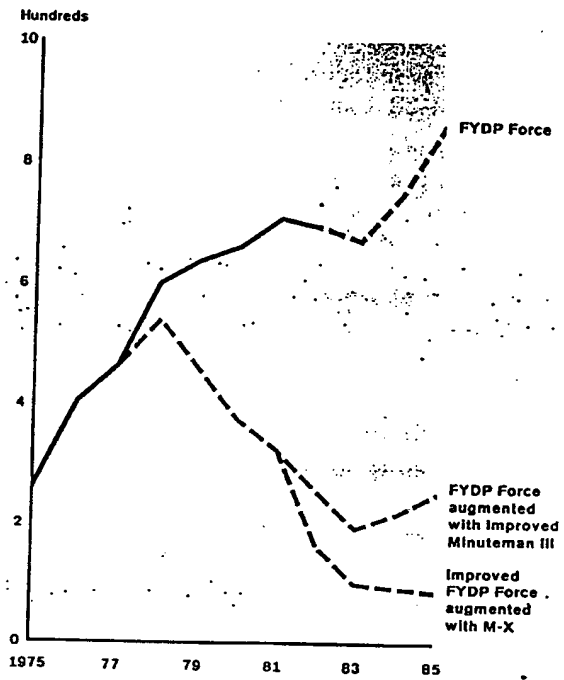
### Surviving ICBM Silos After Attacks Employing a Maximum of Two RVs per Silo

Figure 10

#### US Silos Surviving Soviet Attack



#### Soviet Silos Surviving US Attack



Note: If only one RV could be employed successfully against each silo, the number of survivors would increase by 100 to 300 silos, depending on case and year.

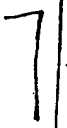
For details about assumptions, uncertainty, and differing views, see Volume II.

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of this Estimate. It is extremely unlikely that during the next ten years the Soviets will conclude that they could launch an attack on US strategic forces which would prevent unacceptable damage to themselves. The Soviets would have to calculate that the US would be able to make a devastating reply to any such attack. We believe the Soviets would hold the same view of the outcome of a US attack.

64. A principal reason for this judgment is that we do not foresee during the next ten years technological advances which would sharply alter the strategic balance in the Soviets' favor. We have reexamined prospects for major advances in systems having important strategic applications, particularly laser applications to air and missile defenses and systems for detecting and trailing US ballistic missile submarines on patrol. We do not believe that the USSR can acquire significant operational capabilities with such systems in the next ten years. Nevertheless, the scope and vigor of Soviet research and development, particularly in strategic defensive systems, bear especially close watching in the years ahead. We believe that we will be able to identify new systems with potential impact on the strategic balance several years prior to their deployment in operationally significant numbers.

65. Although deterrence will be maintained, the four alternative projections of Soviet forces in this Estimate would result in markedly different capabilities. The political significance of each of them would also be different. Their impact would depend a great deal on how they were perceived by the Soviets, by the US, and by other nations. The question of whether the Soviets obtain a psychological edge in a time of crisis, for example, will depend heavily on the degree to which those involved focus on the basic strategic relationship or on appearances, and on the way in which perceptions of strategic forces

affect views about the total capabilities and resolve of both sides.

66. *Force 2* represents an arsenal in which the image of Soviet strategic power grows modestly and no significant increase in the threat to the survival of US offensive force elements materializes. This Force might be regarded as meeting minimum Soviet standards of strategic parity and comparative force effectiveness against programed US forces.

67. *Forces 3 and 4*, however, would appear far more formidable to the US and its allies. After the mid-1970s, these Forces would surpass currently programed US forces in all conventional static measures of strategic power. In some measures they would be markedly superior. Moreover, they would pose a major counterforce threat to Minuteman silos in the early 1980s. Such forces would not provide the Soviets with the capability to prevent devastating retaliation. If, however, the Soviets could reach these force levels without provoking US counterefforts greater than implied by US programed forces, as noted above, they could be perceived as giving the USSR staying power in crises or limited nuclear conflicts exceeding that of the US.

68. *Force 1*, our projection of the most likely Soviet force under present political conditions and SALT constraints, is less formidable than Forces 3 and 4, although it is closer in overall capabilities to those forces than to Force 2. The Force 1 Soviet offensive and defensive forces would give the USSR:

— By about 1980, with the present new Soviet systems, a lead over the US in most quantitative measures of strategic offensive forces.

— In the 1980s, with improved or follow-on systems, a capability to destroy in a counterforce attack a large percentage of the US Minuteman silos.

— An appearance of overcoming the US lead in such qualitative aspects of strategic forces as MIRV technology.

69. Despite these improvements, the problems which the Soviets would face if they contemplated using these forces to attack the US will remain formidable.

— The Soviets will be uncertain about the outcome of an attack on US Minuteman silos and would probably expect a considerable number to survive.

— Their ASW forces will be unable to locate and destroy the US ballistic missile submarine force at sea.

— There will continue to be weaknesses in Soviet defenses against low-altitude bomber attack.

— ABM defenses will be limited by treaty to insignificant levels.

— Soviet civil defense will be unable to prevent massive casualties and breakdown of the economy.

70. We have projected Force 1 as the most likely Soviet program largely on the basis of current evidence, past precedent, and estimated Soviet technological progress. The Soviets could view a program like Force 1 as providing a basis for sustaining rough strategic parity or moving toward eventual superiority over the US.<sup>5</sup> Considering the history

\* The Assistant Chief of Staff for Intelligence, Department of the Army, the Director of Naval Intelligence, Department of the Navy, and the Assistant Chief of Staff, Intelligence, Department of the Air Force believe that Force 1 does not represent an effort to sustain parity. Rather, Force 1 is only a step, during the time frame of this Estimate, toward strategic superiority.

of Soviet strategic policy and force improvement programs, we believe that a program like Force 1 would be intended by Soviet leaders to serve a variety of purposes simultaneously:

— To counterbalance the strategic strength of the US, plus its allies and China.

— To narrow or close the gap between the US and the USSR in important weapons technologies.

— To keep open the possibility of acquiring significant, if only partial, strategic advantages should US behavior permit.

71. As indicated above, we think it likely that in the absence of further SALT constraints, the Soviets will proceed with a program like Force 1. The Soviets do not readily recognize that programs they deem important to their security, and their continuing penchant for concealment and deception, can easily be read by the US as threatening its strategic position and therefore warranting countervailing responses. By the same token, the Soviets are likely to perceive such US responses—as well as certain features of present US programs—as deliberately threatening rather than prudently countervailing.

72. In the coming years, uncertainties faced by each side in assessing the capabilities of the other's future forces, particularly their qualitative characteristics, will tend to magnify more fundamental uncertainties and fears about the other side's strategic objectives. Unless such a strategic environment is significantly changed by arms limitation agreements, it is likely that the Soviet leaders will continue to believe that the acquisition of more and better strategic armaments is their best course.



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